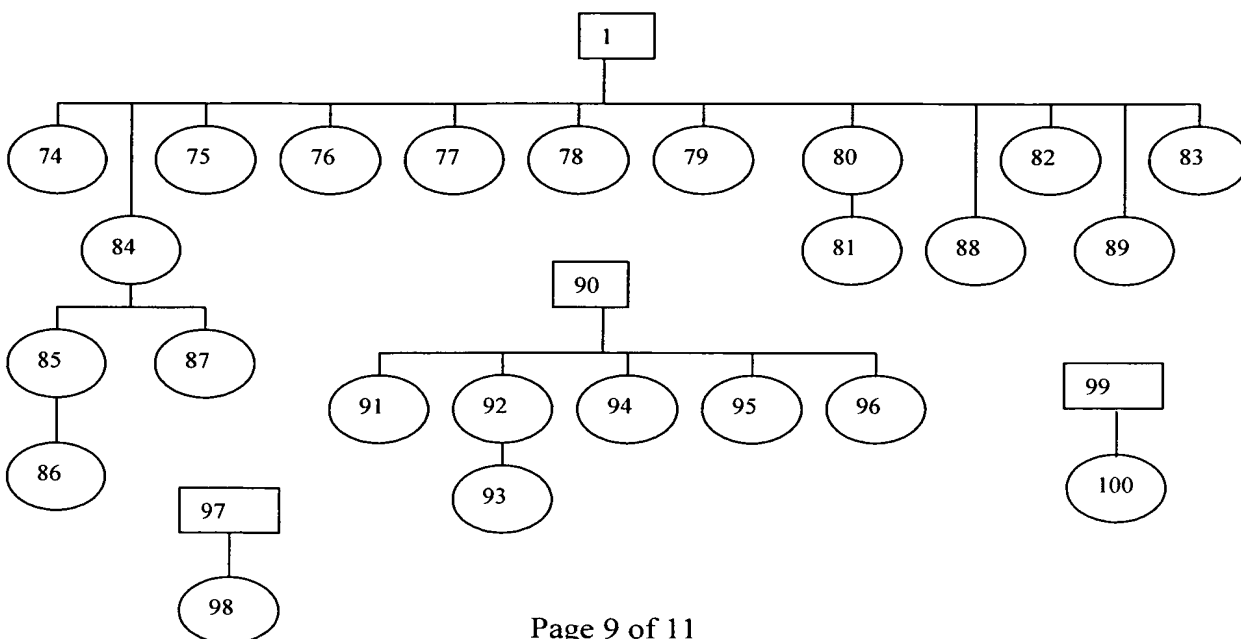


REMARKS

This amendment includes a proposed amendment to the drawings to illustrate the plume shape of a spark as described in the specification at various pages, including for example page 29, starting at line 6 to page 30 at line 4. The drawings were objected to for not illustrating the plume shape as recited in claim 90. Proposed Fig. 1A is a highly schematic representation of the plume shape of a spark event. Although the shape is illustrated as a simple circle, those skilled in the art of ignition systems will appreciate that the circle is not an actual shape.

The drawings were also objected to for not illustrating the discharging of the several energy devices into a single spark generating device "at substantially the same time," citing claims 74, 97 and 98. Original Figures 1 and 3 illustrate four output circuits 40a-40d and 340a - 340d, respectively, connected to a single sparking device 50 and 350, respectively. Proposed Fig. 3a is a timing diagram illustrating discharge pulses from each of the output circuits 340a - 340d of Fig. 3 such that the pulses are delivered to the sparking device 350 "at substantially the same time." The timing overlap of the energy pulses to the devices 50 and 350 in Figs. 1 and 3, respectively, is described in detail in the original specification at, for example, page 20, lines 5-11 and page 29, lines 18-23 and in at least original claim 70.

Turning now to the examination of claims with respect to the prior art of record, claims 1 and 74-100 are pending in this application. The diagram below illustrates the relationship among the claims.



As reflected in the diagram, the pending claims include independent claims 1, 90, 97 and 99. The independent claims 97 and 99 and their dependent claims have been allowed in the Office action. Remaining independent claims 1 and 90 and several of their dependent claims have been rejected as anticipated by U.S. Patent No. 4,502,454 to Hamai et al. Furthermore, claim 79, which depends from claim 1, has been rejected as obvious over the Hamai et al. patent taken with U.S. Patent No. 5,245,252 to Frus et al. Finally, claim 80, which also depends from claim 1, has been rejected over the combination of teachings found in the Hamai et al. patent and U.S. Patent No. 5,446,348 to Michalek et al.

The remaining dependent claims 74, 81, 88, 89 and 91 have been objected to as depending from rejected base claims but are otherwise allowable.

Applicants acknowledge with appreciation the opportunity to discuss the prior art rejection with Examiner Philogene. One of applicants' attorneys, John Conklin, discussed the prior art with Examiner Philogene on November 30, 2005. As a result of that conversation, it was agreed that a clarifying amendment to the preamble of the independent claims 1 and 90 would overcome the prior art rejections. Specifically, it was agreed to amend the preambles of each of claims 1 and 90 to specifically recite the spark generating device to be a "single" device to distinguish it from the plurality of devices in the applied prior art reference.

As amended, independent claims 1 and 90 recite features that are neither found nor suggested by the Hamai et al. patent. Specially, each of claims 1 and 90 requires two or more output stages or energy storage devices connected to a "single" spark generating device. In contrast, the Hamai et al. patent and especially its Figure 9 referenced in the Office action describes and illustrates a **single** output stage (items 145-148) and a **single** energy storage device connected to each of the spark generating devices.

In applicants' claimed invention of an apparatus for controllably generating sparks at a single spark generating device, at least two output stages (claim 1) or at least two energy storage devices (claim 90) are connected to one spark generating device such that energy is transferred to the device in a manner coordinated by the two output stages or two energy storage devices. In contrast, the Hamai et al. patent describes an ignition system in which

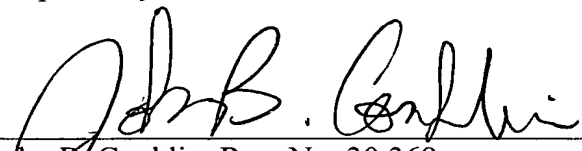
each spark generating device (i.e., a single spark plug) is connected to a single energy storage device or output circuit in an ignition system, which is a conventional configuration. Although the invention in the Hamai et al. patent involves controlling the timing and total energy delivered to the spark plugs of an ignition system for an internal combustion engine, the control of each plug does not involve providing two or more output stages as required by claim 1 or at least first and second capacitors as required by claim 90. Instead, the Hamai et al. patent simply describes a booster circuit 12 and 113 in Figure 3 and 9, respectively, which provides a variable voltage to a single capacitor 146 of each of the output stages.

Because each of independent claim 1 and 90 includes features neither found nor suggested by the Hamai et al. patent, all of the presently rejected claims 1, 75-80, 82-87, 90 and 92-96 are patentable over the cited prior art. Favorable reconsideration of this application is respectfully requested in view of this amendment and accompanying remarks.

CONCLUSION

With entry of this amendment, the patent application is in condition for allowance. If in the opinion of the examiner, however, a telephone conference will expedite the prosecution of this application, the examiner is invited to call the undersigned attorney.

Respectfully submitted,



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Date: November 30, 2005

PROPOSED AMENDMENT TO THE DRAWINGS

In the Office action, the drawings are objected to under § 37 C.F.R. 1.83(a) for not showing every feature of the invention specified in the claims. The Office action specifically identifies language in claims 74, 90, 97 and 98. The Office action requires corrected drawings filed in accordance with Rule 121(d). Attached hereto is a proposed amendment to the drawings adding Figures 1A and 3A to sheets 1 and 3, respectively, of the original drawings. Pursuant to Rule 121 (d), replacements for sheets 1 and 3 are also attached.



FIGURE 1

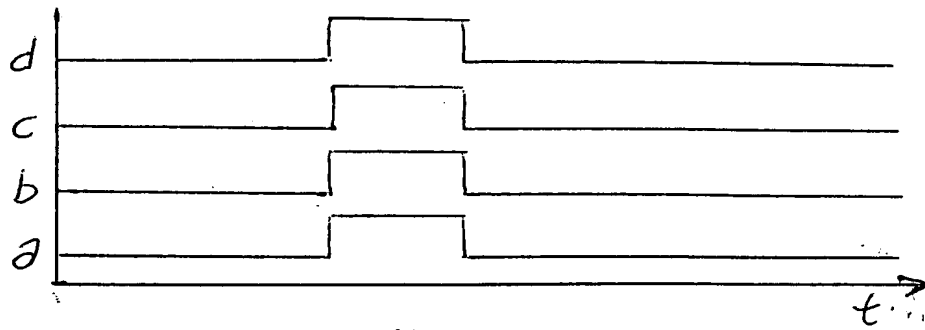


FIGURE 3A

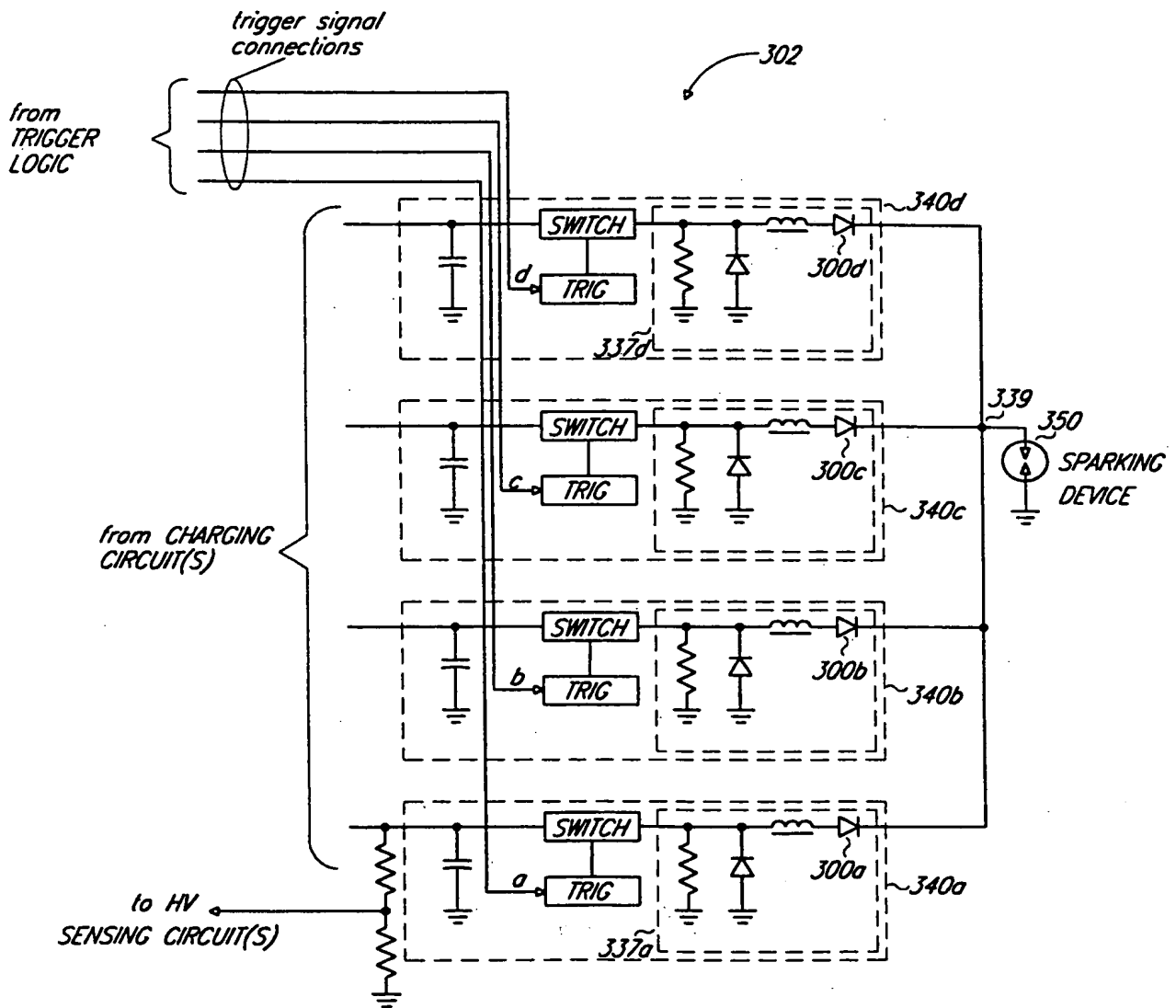


FIGURE 3